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CSO/REF
NPIC/R-84/63
May 1963

PHOTOGRAPHIC INTERPRETATION REPORT

LAUNCH COMPLEX C
KAPUSTIN YAR/VLADIMIROVKA
MISSILE TEST CENTER, USSR
CHANGES SINCE

25X1D



ARMY



NAVY



AIR FORCE



CIA

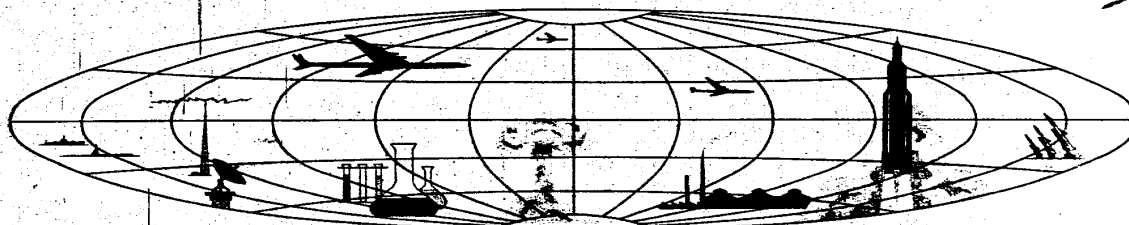
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DECLASSIFICATION REVIEW by NIMA/DOD 3/15/00

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NPIC/R-84/63

PREFACE

This report has been prepared under NPIC Project JN-127/62 in response to parts of CIA requirements OSI/R-83/62 and DDI/RR/E/R-36/62 and Air Force requirement AFIC 62-14 requesting information on Launch Complex C, Kapustin Yar/Vladimirovka Missile Test Center (KYMTC). The remaining parts of these requirements as well as other requirements concerned with different areas of the KYMTC are currently under study in NPIC.

The small scale of the photography used in this report restricts image definition. Therefore, all mensural data included in the report are approximate.

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INTRODUCTION

25X1D [] photography of []
25X1D [] shows continuing expansion of sur-
25X1D face-to-surface missile (SSM) facilities at
25X1D Launch Complex C, KYMTC since []
[] (Figures 1 and 2). The major expan-
sion observed has been the addition of Launch
Area 4C (hardened MRBM/IRBM facilities)

and Launch Area 5C (probable MRBM and
IRBM training facilities). Also, the mission
of Launch Area 1C has probably changed as
a result of the addition of a rail spur to the
launch pad and the construction of a new SSM
support facility.

LAUNCH AREAS

LAUNCH AREA 1C

25X1D The rail line serving Launch Complex C,
25X1D first noted under construction in []
25X1D [] and possibly completed by []
25X1D terminates at the large 190-foot-square launch
25X1D pad in Launch Area 1C. In [] a pos-
sible missile or launcher/erector, 85 feet long,
was observed on the pad in a near horizontal
position. No further interpretation of this
25X1D facility can be made from []
25X1D photography. The presence of the rail line
25X1D indicates that the original mission of the launch
25X1D area has changed considerably since []
[]

25X1D About 3,000 feet southwest of the launch
pad, a new hexagonal-shaped possible concrete
pad or apron, 190 by 140 feet, is located be-
tween two small drive-through buildings, each
70 by 20 feet. The exact nature and purpose
of this facility are unknown. It is served
only by narrow roads or tracks (Figure 3).
The original drive-through checkout building
to the rear of the launch pad was unchanged
25X1D in [] It measures approximately
100 by 40 feet and stands 20 feet high.

The road turning radii in the area average
65 feet. The roads in the vicinity of the launch
pad are 20 feet wide.

LAUNCH AREA 2C

Launch Area 2C, under construction in
[] is now complete. It consists
25X1D of two large concrete launch pads (2C-1 and
2C-2) 865 feet apart. Launch Pad 2C-1 is
280 by 190 feet and 2C-2, 240 by 180 feet.

An unidentified object was observed on
25X1D photography of [] in a horizontal
position near the center of Launch Pad 2C-2.
The combined length of this object and another
one present at the pad is about 130 feet. The
objects may be a missile/erector combination.
If so, it appears that the missile was being
readied for erection and fueling. A possible
fueling station consisting of a 90-foot-long
structure or series of vehicles lies east of
the pad. A possible fuel line extends from
this point to the center of the pad (Figure 4).

Five vehicles were on the loop road be-
hind the vehicle stall in [] In length,
25X1D they are as follows: two, 50 feet; one, 40
feet; one, 35 feet; and one, 30 feet. Another
possible vehicle was located northwest of the
pad.

There were two vehicles on Pad 2C-1
and three on the loop road between the pad
and the vehicle stalls. One on the west side
of the launch pad is 60 feet in length; one on

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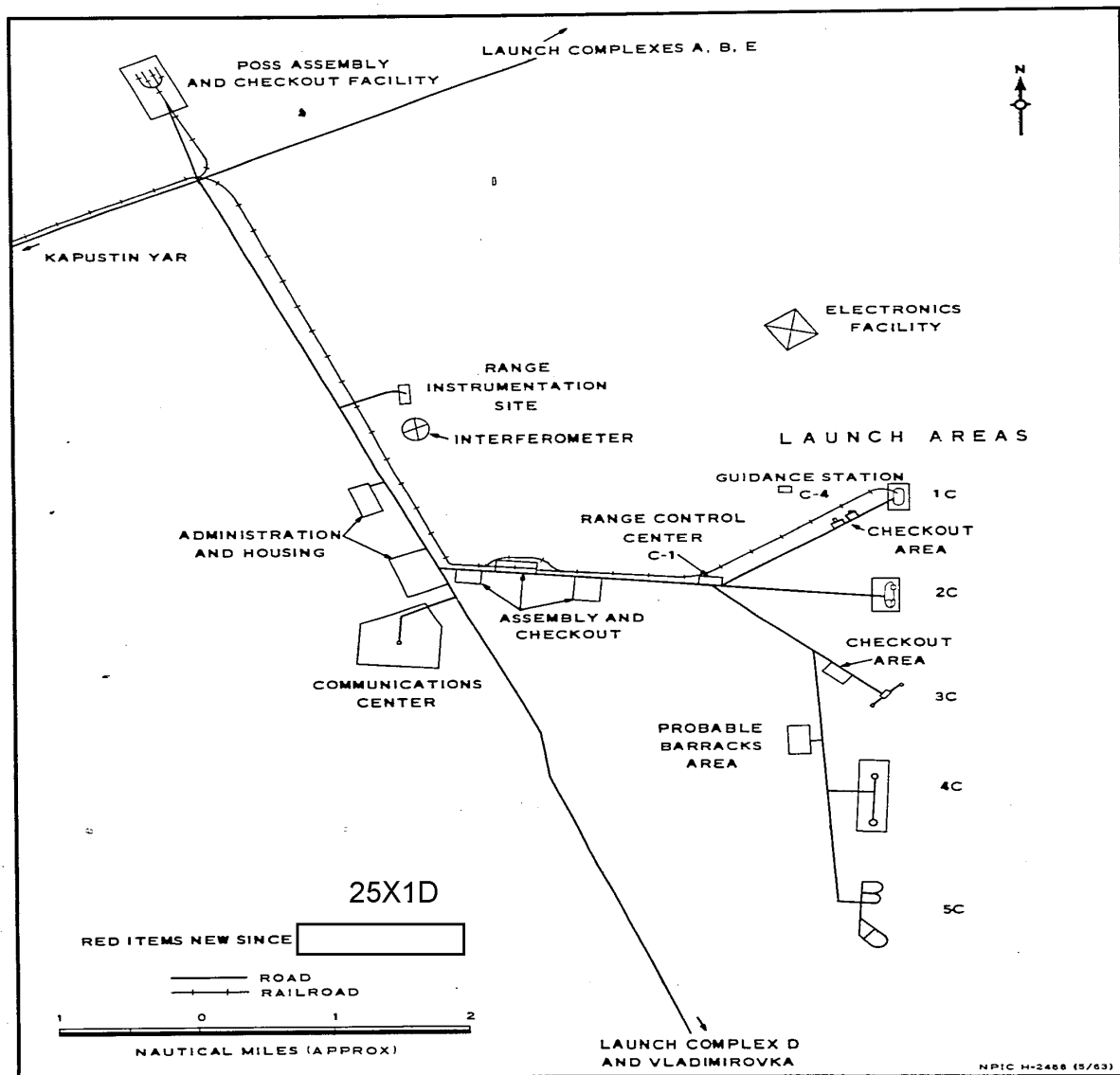


FIGURE 2. LAUNCH COMPLEX C.

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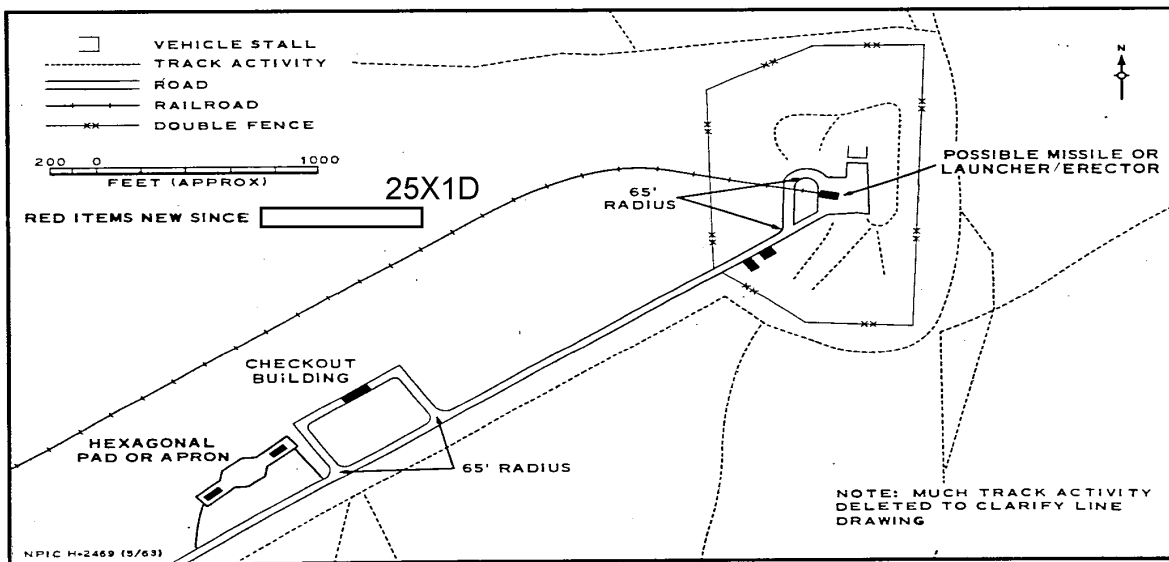


FIGURE 3. LAUNCH AREA 1C

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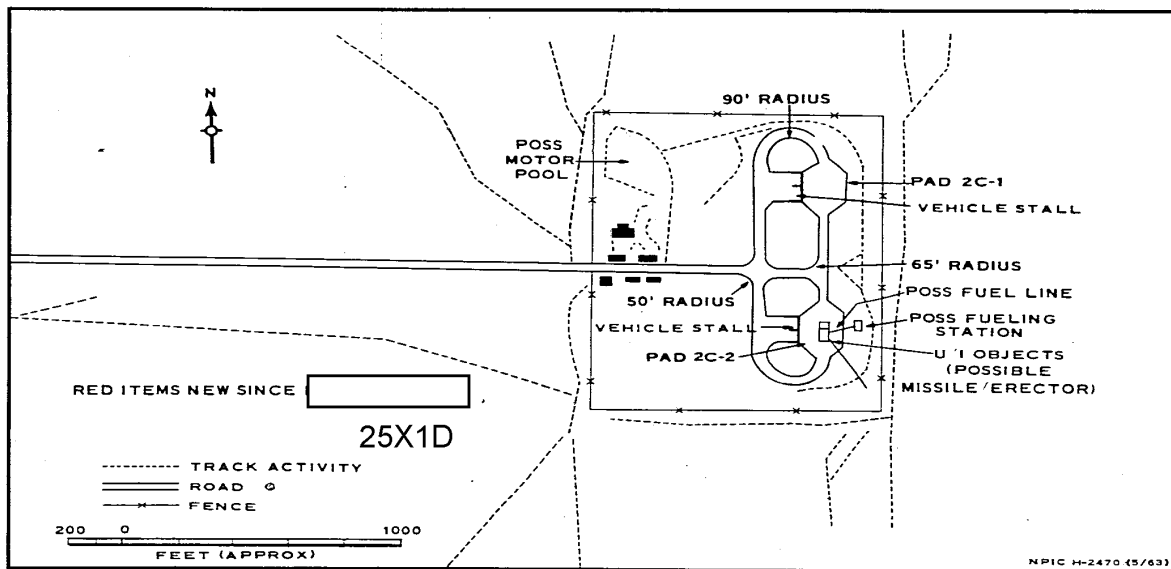
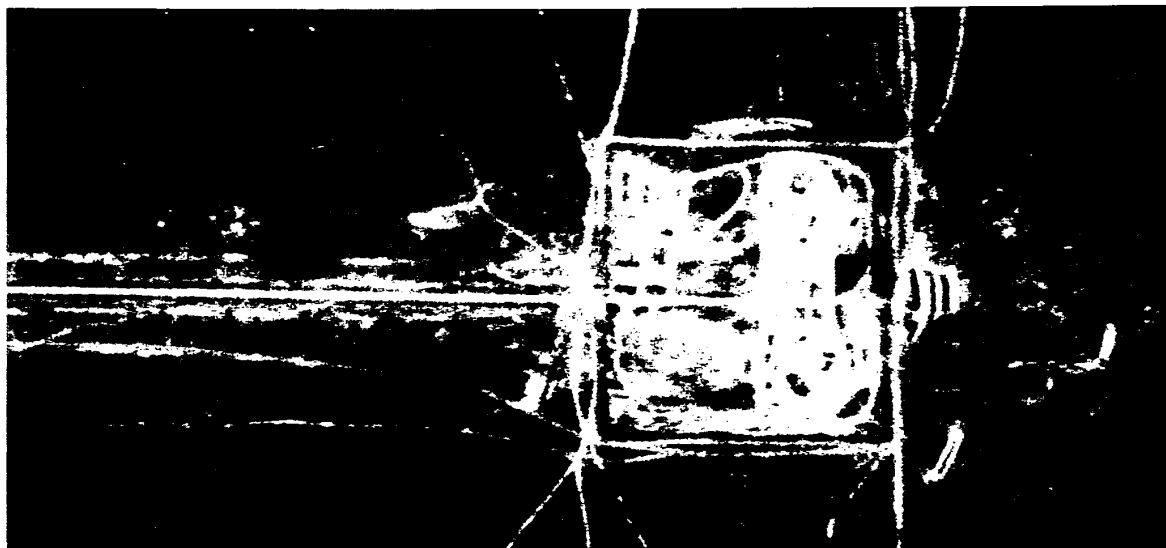


FIGURE 4. LAUNCH AREA 2C

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the east side, 30 feet. The other three vehicles are 30, 40, and 50 feet long, respectively, west to east. A possible vehicle was near the southwest corner of the launch pad.

To the rear of the pads, in addition to the five buildings which existed in [] a T-shaped building, 70 by 70 feet overall, has been constructed. North of the buildings is a possible motor and/or equipment pool.

The roads within and approaching the launch area are 20 feet wide. Turning radii of the main intersection and the intersection between the pads are about 50 and 65 feet, respectively. The radii of the north and south loops are about 90 feet.

LAUNCH AREA 3C

Only minor changes have been made to Launch Area 3C since [] (Figure 5). The main launch pad, 190 by 190 feet, has a probable tower, approximately 140 feet high, in the center. Two small new structures are located just north of the pad.

A structure, 110 by 20 feet, is located on the southwest dumbbell pad. An L-shaped structure, approximately 75 by 50 feet, and a possible vehicle are located on the northeast dumbbell pad. These pads are 190 by 160 feet each.

The road turning radii into the main pad area are approximately 130 feet and 80 feet. The road serving the main pad is 20 feet wide. Since [] the road network in the checkout area has been expanded. No electronic gear directly associated with this facility has been identified. Guidance Station C-5 has been dismantled.

LAUNCH AREA 4C

Activity at Launch Area 4C was initiated about [] although the area was not identified as a launch facility until []

when it was in a midstage of development. The facility was probably completed in early [] after a construction period of about 20 months. The definite similarity between sites in this launch area and operational hardened MRBM/IRBM launch sites identified elsewhere in the Soviet Union indicates that Launch Area 4C is the prototype for hardened launch facilities.

Launch Area 4C consists of two hardened MRBM/IRBM launch facilities (4C-1 and 4C-2) 2,750 feet apart in a north-south alignment. Although the two facilities are similar, there are some variations. The study of Launch Area 4C is based on photography of []

The overall launch area is 4,200 by 1,500 feet and is double fenced. It is composed of an operations center, two launch facilities, and a security station. A road enters from the west at the midpoint and joins a north-south road serving the launch facilities. These roads appear hard-surfaced (Figures 6 and 7).

The road turning radius into the launch area from the north is 400 feet and from the south, 130 feet. The turning radii within the launch area to either launch facility are 125 feet. The average turning radius within each launch facility is about 100 feet. Road widths average 30 feet.

Launch Facility 4C-1

Launch Facility 4C-1, located at the northern end of the area, contains two hardened MRBM/IRBM launch positions (A and B) and a possible portal silo (C) which occupy three corners of a rectangular pattern (Figure 8). Each position appears to consist of a dark circular aperture, approximately 20 feet in diameter, straddled by two probable rail supports about 40 feet apart and approximately [] above ground level. A

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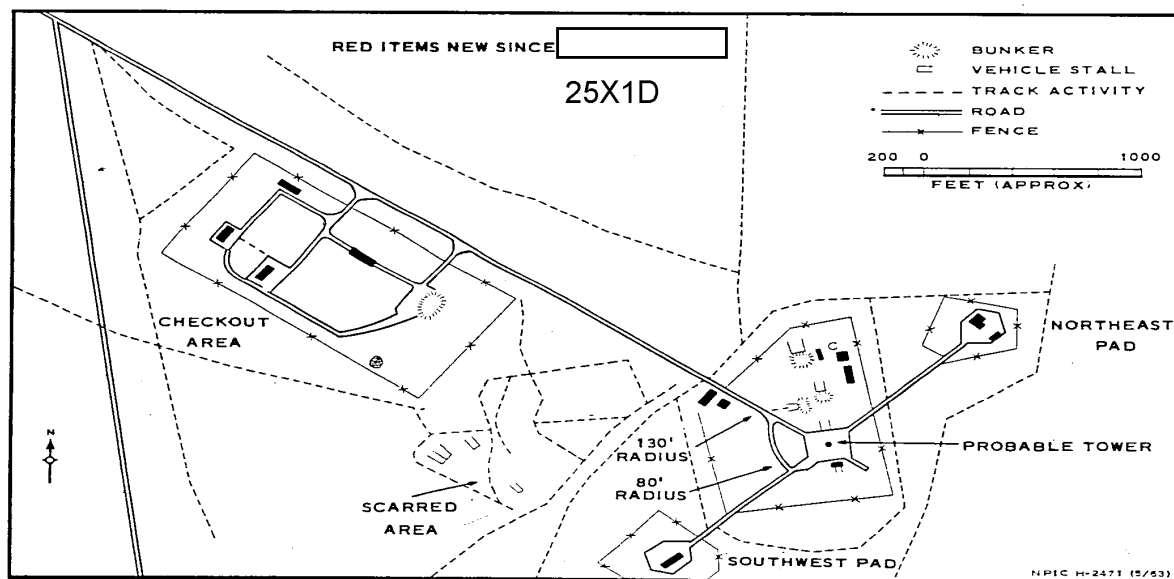
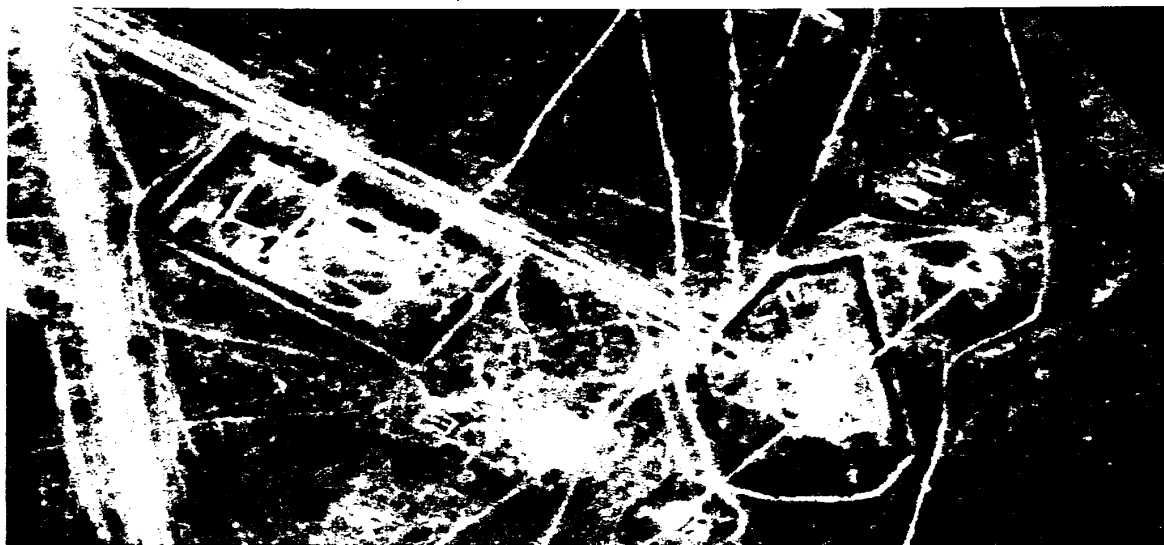


FIGURE 5. LAUNCH AREA 3C

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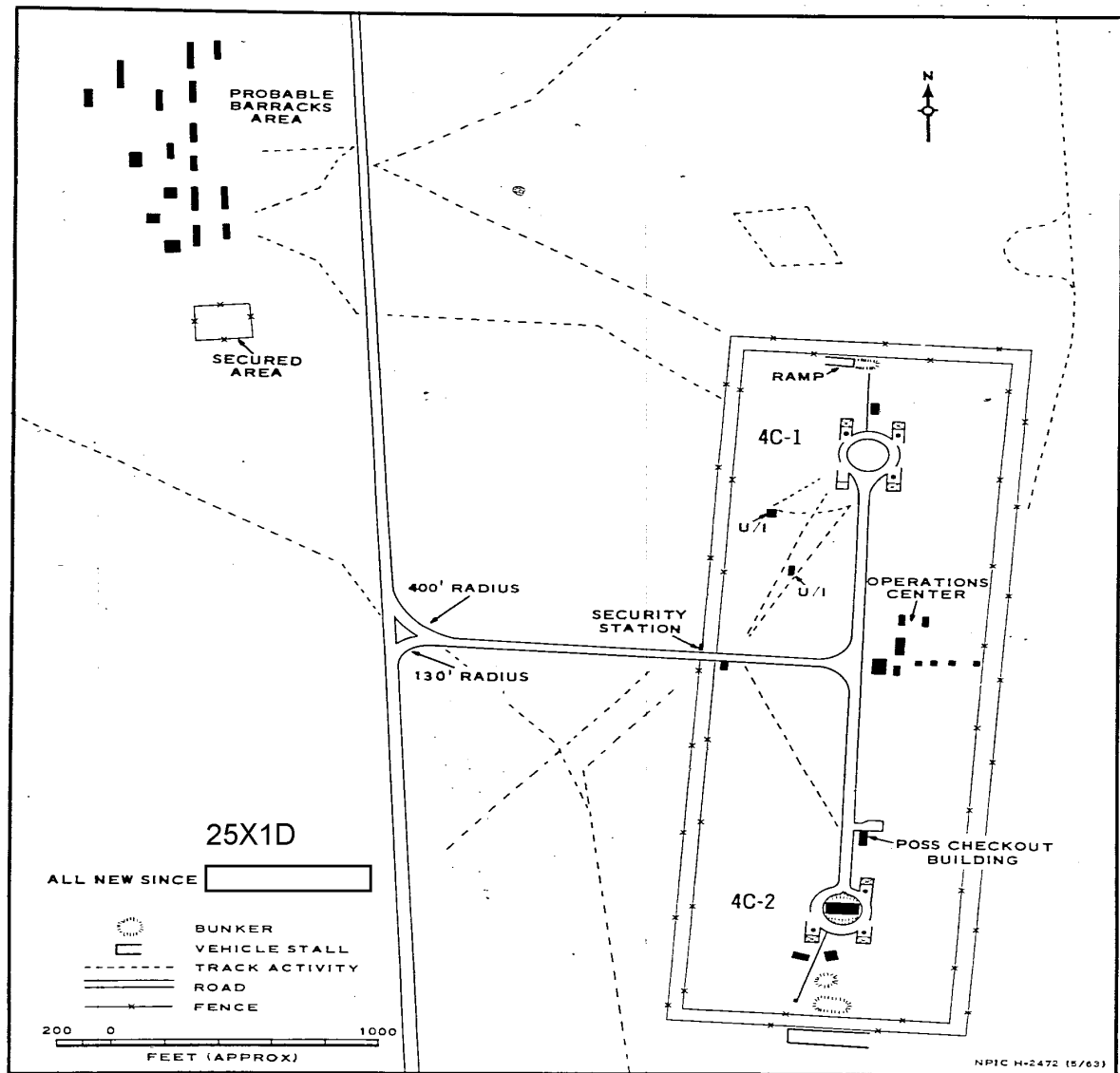


FIGURE 6. LAYOUT OF LAUNCH AREA 4C.

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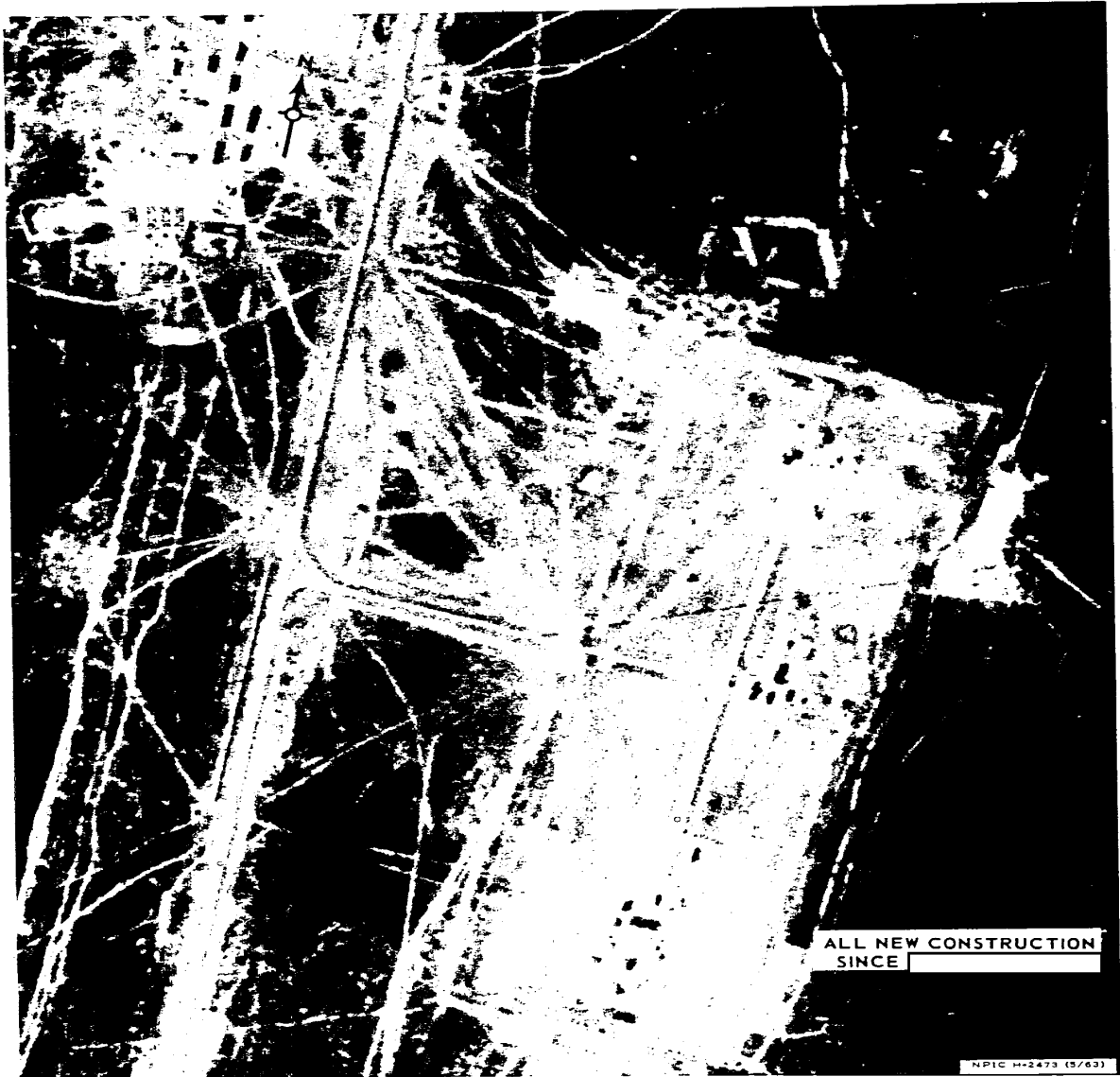


FIGURE 7. LAUNCH AREA 4C

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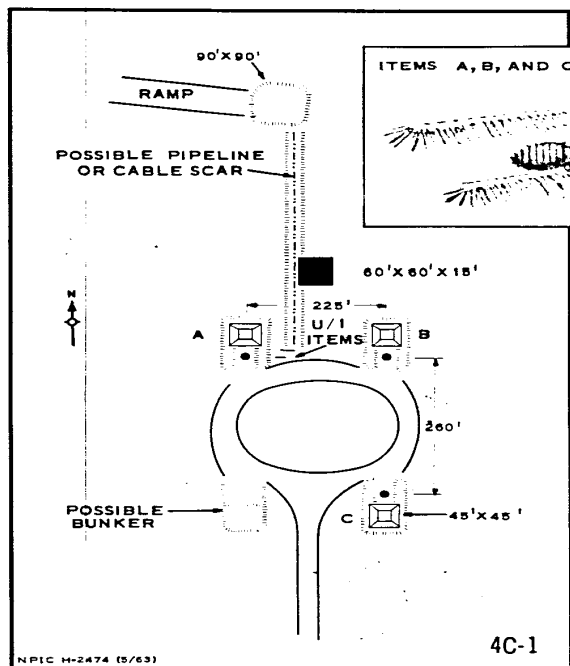


FIGURE 8. LAUNCH FACILITY 4C-1.

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possible concrete cover, 45 by 45 feet, apparently rides on rails adjacent to the aperture. This is apparent at A and B and possibly at C. There is an indication of a possible bunker at the fourth corner of the rectangular pattern. Construction at this corner was first evident in [redacted] Launch Facility 4C-1 is served by a 30-foot-wide circular loop road connecting with the service road. Launch Positions A and B are 225 feet apart. Deployed hardened MRBM/IRBM sites have been reported to have a similar separation. A control bunker, now apparently earth covered, was probably under construction in the center of the facility in [redacted]

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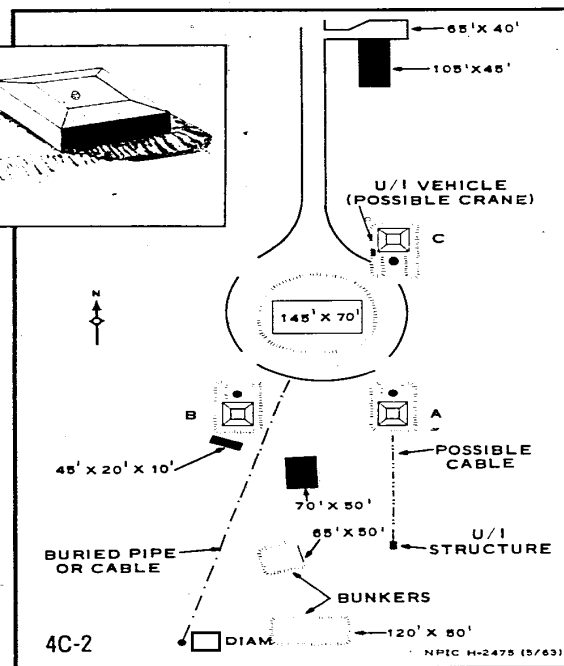


FIGURE 9. LAUNCH FACILITY 4C-2.

Immediately north of the launch positions is a 60- by 60-foot building. A possible pipeline or cable scar extends from the launch facility along the west wall of the building to a 90- by 90-foot semiburied bunker, 240 feet north of the building. A 50-foot-wide depressed ramp also serves the bunker.

A vehicle approximately 60 feet in length was on the loop road between the launch positions in [redacted] Two unidentifiable items were located just west of the vehicle.

Launch Facility 4C-2

Launch Facility 4C-2, located at the south end of the area, consists of two hardened MRBM/

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25X1

IRBM launch positions (A and B) and a possible portal silo (C) arranged similarly to 4C-1 (Figure 9). However, there is no indication of any construction at the fourth corner of the rectangular pattern. The launch positions are identical to those at 4C-1. Launch Positions A and B are 220 to 230 feet apart. The loop road is approximately 30 feet wide. A probable underground bunker appears to occupy an area 140 by 70 feet. Unlike 4C-1, this facility was not observed in []

145 by 60, [] by 35, 80 by 20, and 70 by 25 feet. The other five probably have only one story and measure 80 by 20, 65 by 20, 35 by 20 (2), and 20 by 20 feet.

There are also two security buildings at the main gate, one inside the double fence and one outside. The main building, inside the fence, measures approximately 60 by 30 feet.

Ground Scars

Just north of the Area 4C fencelines is a rhomboid-like ground scar. Each leg is approximately 285 feet in length. To the south of Area 4C fencelines is a trapezoid-shaped ground scar. The base leg is 445 feet in length. The parallel leg is 380 feet. The perpendicular leg is 340 feet and the fourth leg is 310 feet.

Probable Barracks Area

A probable barracks area for Launch Areas 4C and 5C personnel is located approximately .5 nm northwest of Launch Area 4C (Figure 6). It covers an area 1,500 by 1,000 feet and contains at least 17 buildings. The area consists of the following:

Buildings	Dimensions (ft)	Stories
2	140 x 40	2
2	140 x 45	1
2	95 x 30	1
1	140 x 30	1
1	145 x 30	1
1	105 x 30	1
1	95 x 25	1
1	90 x 30	1
1	85 x 25	1
1	90 x 20	1
1	75 x 30	1
1	40 x 40	1
1	50 x 15	1
1	45 x 15	1

A secured area, 260 by 210 feet, is located immediately south of the probable barracks area.

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In [] an unidentified vehicle, possibly a crane, was located at the possible portal silo (C). A boomlike structure casts a shadow across C. The length of the shadow indicates the structure is 45 feet high. A 65-foot-long vehicle was located at the upper side of the loop road. Three 50-foot-long vehicles were located along the west side of the loop. Two 20-to 25-foot-long vehicles were between the others.

Just north of the possible portal silo is a 105- by 45-foot building, possibly arched-roofed, served by a concrete apron.

Operations Center

The operations center consists of nine buildings located at the junction of the roads within the launch area (Figure 6). Four of the buildings probably have two stories and measure

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LAUNCH AREA 5C

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There are two facilities under construction, one IRBM site (5C-1) to the north and one MRBM site (5C-2) to the south (Figures 10 and 11). Both facilities were in an early stage of construction in [] In [] the IRBM facility was in about a mid-stage of construction and the MRBM facility was in a late stage of construction.

The pattern, size, and timing at Launch Facility 5C-1 indicate that it is probably the training counterpart of the IRBM soft sites deployed in the Soviet Union and identified under construction at Guanajay and Remedios in Cuba. Likewise, Launch Facility 5C-2 is probably the training counterpart of the inline MRBM launch sites with elongated pads deployed in the USSR.

IRBM Launch Facility 5C-1

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Launch Facility 5C-1 has two launch pads, 5C-1a and 5C-1b, under construction. The pad separation is approximately 750 feet and the facility is oriented on an azimuth of about 95 degrees [] degrees. The pads, although still under construction, will be approximately 290 by 90 feet. There is a deep excavation immediately adjacent to the center of pad 5C-1b.

There are three structures under construction between the pads in line from the front to rear as follows: one 80 by 75 feet, one 75 by 60 feet, and one 55 by 20 feet. These appear to conform with structures at some of the deployed sites.

The roads are approximately 30 feet wide. Within the launch facility the turning radius of roads is 150 feet. Ditching for probable buried cables runs to Launch Facility 5C-1 from a control center between the facilities. There are two small excavations also within

the facility, one southeast of each pad. Their purpose is unknown.

MRBM Launch Facility 5C-2

25X1D

Launch Facility 5C-2 has two launch pads, 5C-2a and 5C-2b, with a pad separation of about 650 feet and is oriented on an azimuth of approximately 45 degrees [] The pads, in a late stage of construction, are approximately 265 by 60 feet.

There are two bunkers or buildings in line in the middle of the facility. One is forward of the pads and is 65 by 45 feet; the other, L-shaped, is located between the pads and measures 80 by 70 feet. Adjacent to the L-shaped building is a small structure about 20 by 20 feet. On the inside edge of each pad is a 25- by 25-foot structure. Two other small structures lie within the facility.

The roads are approximately 30 feet wide. Within the launch facility, the turning radius of roads is 100 feet.

Ditching for probable buried cables runs to 5C-2 from the control center. The ditching runs to each building or bunker in the center of 5C-2 and to each launch pad.

The control center building is approximately 105 by 45 feet. Behind the building are two small unidentified structures.

The launch support road comes south from the main Complex C base and turns east into the launch area (turning radius is 360 feet). At the junction with the launch area service roads the turning radius is 80 feet.

West of the control center is a large secured area, roughly 1,400 by 1,200 feet, which is probably a construction support area for 5C. It contains a number of small structures and unidentified open storage. In the center of the secured area is a 90- by 30-foot building.

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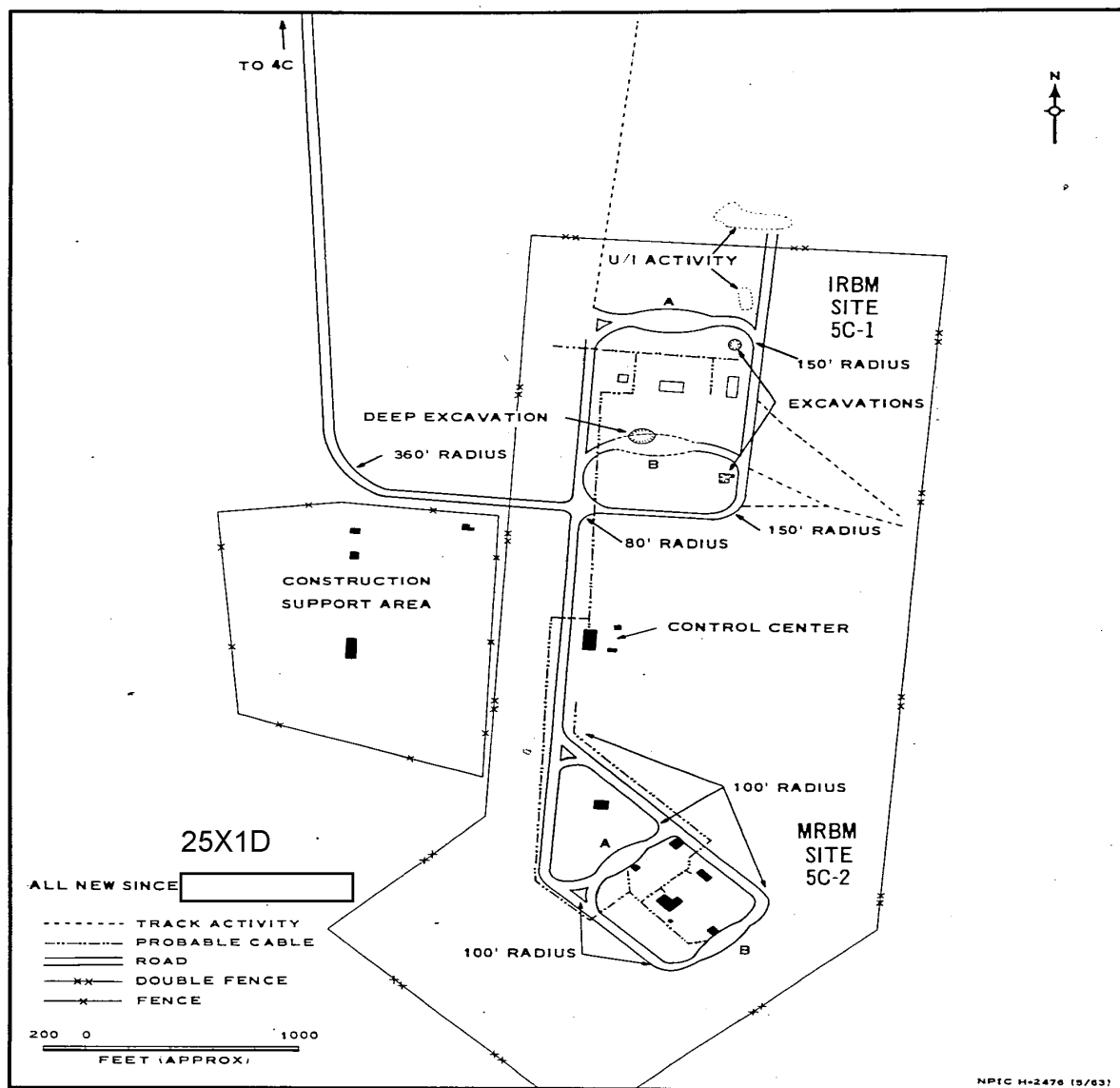


FIGURE 10. LAYOUT OF LAUNCH AREA 5C.

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FIGURE 11. LAUNCH AREA 5C [REDACTED]

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ELECTRONICS FACILITIES

The Range Control Center (C-1), one guidance station (C-4), and the two tracking stations (C-2 and C-3) are essentially unchanged. One mobile guidance station (C-5), located behind Launch Area 3C, has been abandoned.

A range instrumentation site and an elec-

tronics facility, approximately 8,500 feet north of Guidance Station C-4, have been added to Launch Complex C.

The range instrumentation site was under construction in [REDACTED] (Figure 12). Of the ten buildings reported at that time, three remain.

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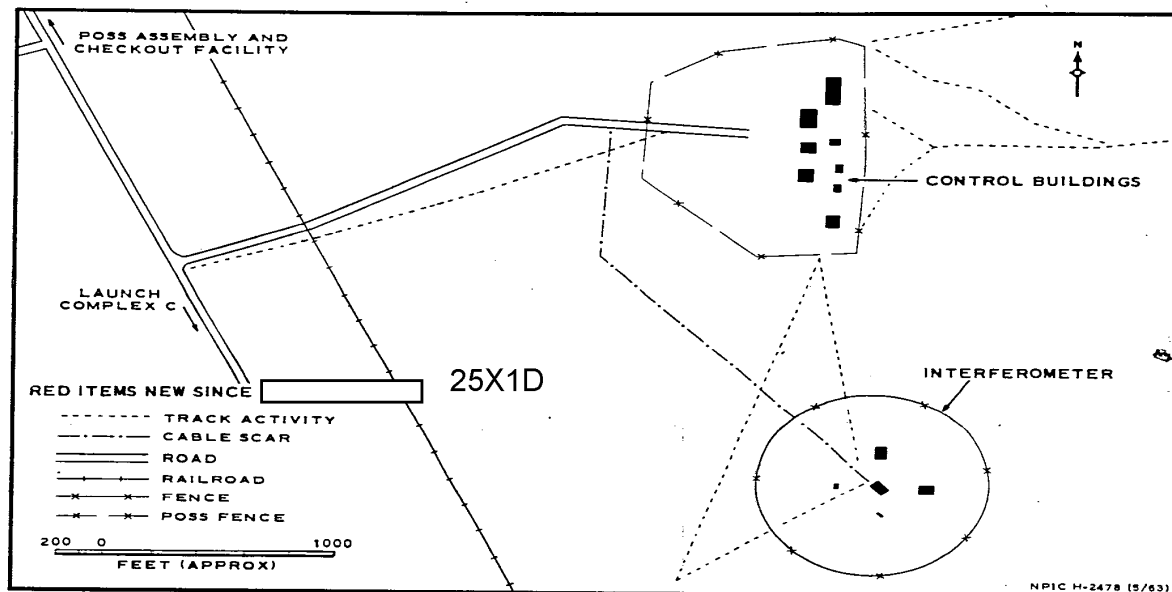


FIGURE 12. RANGE INSTRUMENTATION SITE.

Five new buildings have been added. The original entrance road has been realigned. The interferometer has been completed. The approximate diameter of the fenced area is 1,100 feet, and each leg of the interferometer is about 410 feet long.

The electronics facility lies approximately 8,500 feet north of Guidance Station C-4 (Figure 13). The area is fenced and measures approximately 1,860 feet on a side. At each corner inside the secured area is a post or mast. Cable scars run diagonally from each post or mast to a junction point in the center of the facility. These corner posts form a

square 1,640 feet on a side. Adjacent and southwest of the junction point is a small building, possibly a control center, and five possible vehicles. The diagonals between the four outer positions are each 2,300 feet long. One diagonal is oriented on a 0 - 180 degree axis and the other, on a 90 - 270 degree axis.

This facility is similar, if not identical, to the facility located just north of Launch Complex C at the Tyura Tam Missile Test Center.

The density of the background in the antenna field on photography of [] precludes interpretation of the communications center near Launch Complex C.

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POSSIBLE ASSEMBLY AND CHECKOUT FACILITY

Reported as under construction in NPIC/R-8/61, 1/ this support facility is complete and operational. The facility probably became

operational about [] The area is secured by a double fence. It is served by both rail and road. The turning radii of

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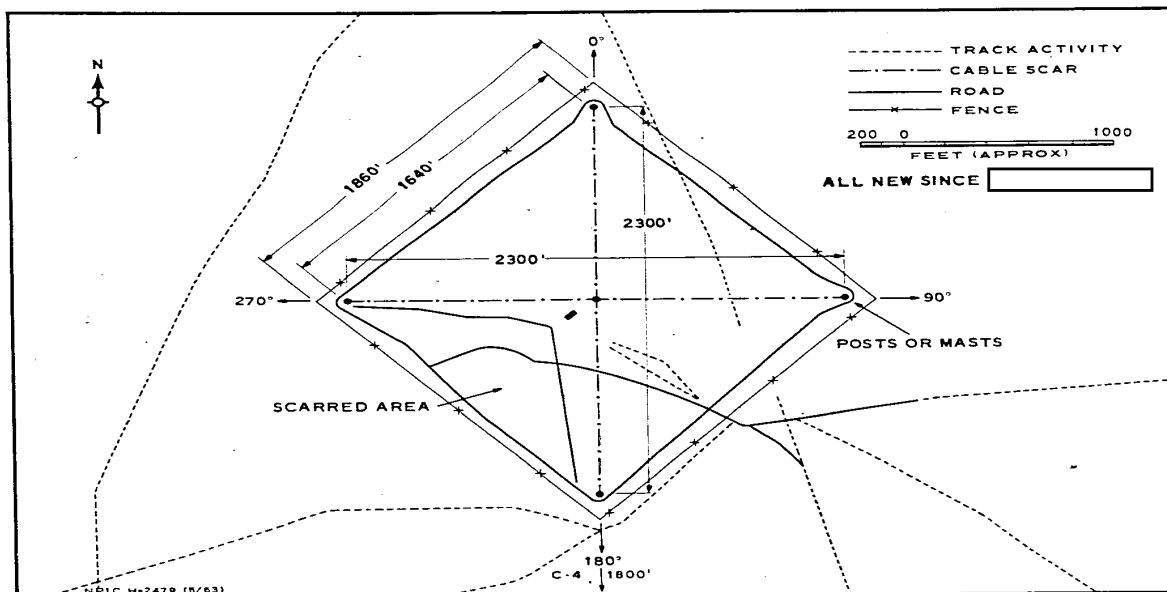


FIGURE 13. ELECTRONICS FACILITY

the roads average 100 feet. The roads average 20 feet wide (Figure 14).

There are eight drive-through buildings and five other buildings, four of which appear to be for administration. Four of the drive-through buildings are rail served and all eight are road served. The four rail-served buildings are: two, 85 by 35 feet; one, 140 by 40 feet; and one, 170 by 30 feet. The road-served-only buildings are: two, 130 by 35 feet; one,

70 by 35 feet; and one, 85 by 35 feet. The dimensions of the administrative-type buildings are as follows: two, 45 by 25 feet; one, 90 by 25 feet; and one, 65 by 25 feet. One miscellaneous structure is 75 by 25 feet.

The position of this support facility would enable support of all the SSM complexes. However, the existence of rail service between this facility and Launch Area 1C suggests a possible association with the latter activity.

ALTERNATE DESIGNATIONS OF LAUNCH FACILITIES

NPIC	COORDINATES	TDI
Launch Area 1C	48-36-50N 46-17-40E	Kapustin Yar Test Site 7 MRBM
Launch Area 2C	48-35-54N 46-17-40E	Kapustin Yar Test Site 6 MRBM
Launch Area 3C	48-34-58N 46-17-40E	Kapustin Yar Test Site 5 MRBM
Launch Area 4C	48-33-50N 46-17-35E	Kapustin Yar Test Site 4 IRBM
Launch Area 5C	48-32-40N 46-17-40E	Kapustin Yar Test Site 2 MRBM

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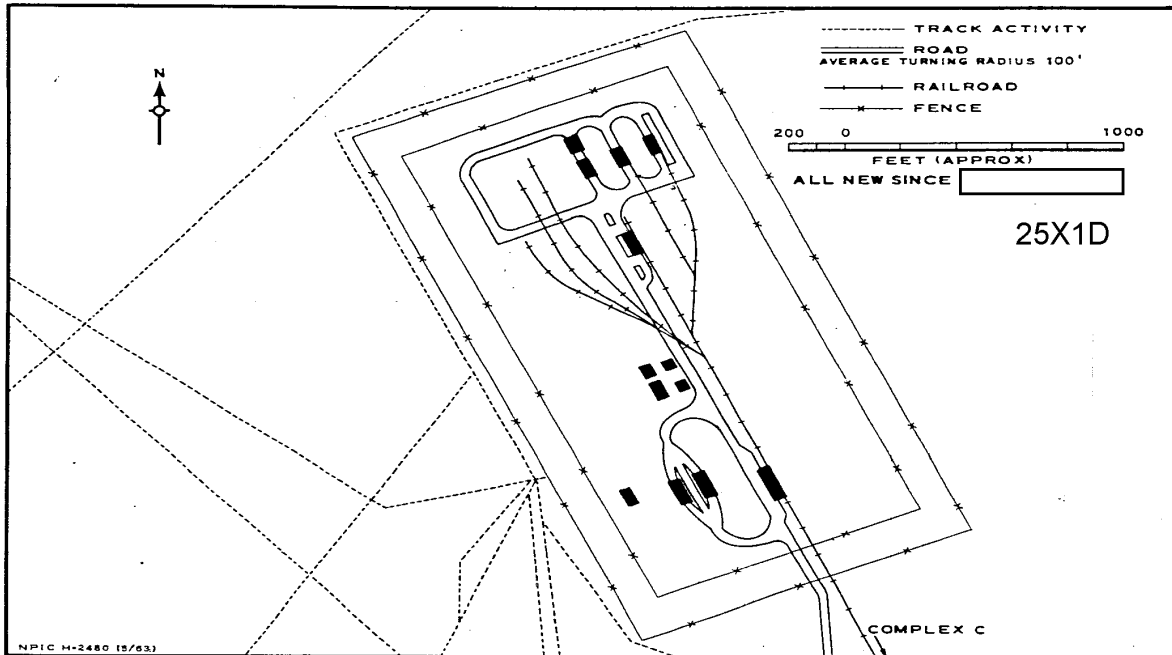


FIGURE 14. POSSIBLE ASSEMBLY AND CHECKOUT FACILITY.

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REFERENCES

PHOTOGRAPHY

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DOCUMENTS

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1. NPIC. R-8. '61. Kapustin Yar, Vladimirovka Missile Test Center, USSR. [REDACTED] Oct 61
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REQUIREMENT

CIA. OSI R-53. '62

CIA. DDI RR. E. R-36. '62

AF. 62-14

NPIC PROJECT

JN-127. '62 (partial answer)

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